

REMARKS

The Office Action dated September 18, 2008, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Status of the Claims

Claims 25, 32, 34, 35, 40-42, 44, 45, 48 and 49 have been amended to more particularly point out and distinctly claim the subject matter of the invention. Claims 79-84 have been cancelled without prejudice or disclaimer. New claims 85 and 86 have been added. No new matter has been added. Thus, claims 25, 27-29, 31, 32, 34-37, 39-45, 48, 49, 56, 58, 59, 61, 66-78, 85 and 86 are currently pending in the application and are respectfully submitted for consideration.

Claim 69 not Addressed

Applicants note that claim 69, which was added in the previous Response, was not addressed in the Office Action, although claim 69 was listed as rejected in the Office Action Summary. Because no art-based rejection of claim 69 was presented in the Office Action, Applicants presume that the claim is allowable. Applicants note that if claim 69 is rejected on art-based grounds in a next Office Action, the rejection of claim 69 would be presented for the first time on the record and as such, a next Office Action rejecting claim 69 **cannot** be made final per 37 C.F.R. § 1.113.

Rejections under 35 U.S.C. § 103

Claims 25, 27, 28, 31, 32, 34-36, 39-45, 48, 49, 56, 58, 59, 61, 66, 67, 70-72 and 74-84 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Raith et al. (U.S. Patent No. 6,259,915) in view of Proctor et al. (U.S. Publication No. 2004/0256963). The Office Action took the position on pages 2-8 that the combination of Raith et al. and Proctor et al. teaches all of the features of the rejected claims. Applicants respectfully submit that Raith et al. and Proctor et al., both individually and in combination, fail to teach or suggest all of the features of the above-rejected claims. Reconsideration of the claims is respectfully requested.

Independent claim 25, from which claims 27-29, 31, 56 and 58 depend, recites an apparatus including a processor configured to provide access to a wireless communication network based on an IEEE 802.11 standard and to determine and transmit communication information to a subscriber terminal. The communication information includes frequency band information indicating a plurality of frequency bands on which at least one access node portion of the wireless communication network is configured to communicate. The processor is further configured to incorporate the communication information in signaling using a transmission of specific frames to the subscriber terminal. The communication information further includes a frequency band coverage indicator related to at least one frequency band of neighboring access nodes of the apparatus in the wireless communication network.

Independent claim 32, from which claims 34-37, 39-43, 59 and 61 depend, recites an apparatus including a processor configured to communicate in a wireless communication network based on an IEEE 802.11 standard and to receive communication information transmitted from at least one access node of the wireless communication network. The communication information includes frequency band information indicating a plurality of frequency bands on which the at least one access node is configured to communicate. The communication information is received from the at least one access node by signaling by transmission of specific frames. The processor is configured to process the received communication information so as to determine, based on the communication information, a communication connection capability of at least part of the at least one access node on the basis of the frequency band information. The processor is configured to decide on a communication connection changeover for the apparatus by using a processing result. The communication information further includes a frequency band coverage indicator related to at least one frequency band of neighboring access nodes of the apparatus in the wireless communication network.

Independent claim 44 recites a computer program embodied on a computer readable storage medium configured to control a processor to perform a process, including determining communication information and transmitting the communication information to a subscriber terminal. The communication information includes frequency band information indicating a plurality of frequency bands on which at least one access

node in a wireless communication network based on an IEEE 802.11 standard is capable of communication. The process also includes incorporating the communication information in signaling using a transmission of specific frames to the subscriber terminal. The communication information further includes a frequency band coverage indicator related to at least one frequency band of neighboring access nodes of the apparatus in the wireless communication network.

Independent claim 45 recites a computer program embodied on a computer readable storage medium configured to control a processor to perform a process, including receiving communication information transmitted from at least one access node in a wireless communication network based on an IEEE 802.11 standard. The communication information includes frequency band information indicating a plurality of frequency bands on which the at least one access node is capable of communication. The communication information is received from at least one access node by signaling by transmission of specific frames. The process also includes processing the received communication information to determine in the subscriber terminal, based on the communication information, a communication connection capability of at least part of the at least one access node on the basis of the frequency band information and the frequency band coverage indicator. The process further includes deciding, in the subscriber terminal, on a communication connection changeover of the subscriber terminal by using a result of the processing. The communication information further includes a frequency

band coverage indicator related to at least one frequency band of neighboring access nodes of the apparatus in the wireless communication network.

Independent claim 48, from which claims 66-69 depend, recites a method including determining communication information from at least one access node in a wireless communication network based on an IEEE 802.22 standard. The communication information includes frequency band information indicating a plurality of frequency bands on which the at least one access node is capable of communication. The method also includes transmitting the communication information from the at least one access node to a subscriber terminal by signaling by transmitting specific frames. The communication information further includes a frequency band coverage indicator related to at least one frequency band of neighboring access nodes of the apparatus in the wireless communication network.

Independent claim 49, from which claims 70-78 depend, recites a method including receiving communication information from at least one access node in a wireless communication network based on an IEEE 802.22 standard. The communication information includes frequency band information indicating a plurality of frequency bands on which said at least one access node is configured to communicate. The communication information is received by signaling by transmission of specific frames. The method also includes processing the received communication information and determining based on the communication information a communication connection capability of at least part of the at least one access node on the basis of the frequency

band information and the frequency band coverage indicator and using a processing result for a decision on a communication connection changeover of a subscriber terminal. The communication information further includes a frequency band coverage indicator related to at least one frequency band of neighboring access nodes of the apparatus in the wireless communication network.

As will be discussed below, Raith et al. and Procter et al., both individually and in combination, fail to teach or suggest all of the features of the presently pending claims.

Raith et al. generally discusses “a multiple hyperband cellular communications system and multiple hyperband capable mobile stations for operation therein” (column 1, lines 30-32). “These mobile and base stations support multiple hyperband operations including, for example, mobile assisted channel allocation (MACA), mobile assisted handover (MAHO), cell reselection, traffic channel assignment, control channel location and registration. By bridging multiple hyperbands, service quality can be enhanced” (column 2, lines 57-63, of Raith et al.).

Procter et al. generally discusses “increasing the range of a wireless local area network (WLAN)” (paragraph [0002]).

[S]ome revisions of 802.11 include a message referred to as the DS parameters set message. It should be noted that in accordance with the present [alleged] invention, the beacon is only transmitted by the AP, not by client units or stations. The DS parameter specifies which channel the direct sequence spread spectrum wave form (802.11b) is transmitted on. Using a frequency translating repeater will cause the channel number to be incorrect relative to the DS parameter causing erroneous behavior for the client units or station devices (STA). In the present [alleged] invention, the transmitted DS parameters set message is preferably modified with the

channel number intended for the STA, rather than the channel that is transmitted on from the access point (AP). The translating repeater will then "correct" the message by performing the frequency translation, which will result in the message being retransmitted on the frequency identified in the beacon transmitted from the AP.

(Paragraph [0013], of Procter et al.).

Independent claim 25 recites, in part, a processor configured to "provide access to a wireless communication network based on an IEEE 802.11 standard". Independent claims 32, 44, 45, 48 and 49, which each have their own scope, recite similar features. As the Office Action recognized at least on page 3, 802.11 is and IEEE standard for a WLAN. The Office Action conceded on page 3 that Raith et al. fails to teach a wireless network that is a WLAN. Rather, the Office Action relied on Procter et al. to allegedly cure these deficiencies of Raith et al. Applicants respectfully submit that while Procter et al. mentions 802.11, the combination of Raith et al. and Procter et al. is improper.

Raith et al. is directed to cellular communications, which differs from communication in a WLAN. Applicants submit that for example, in a WLAN, the handover decision is made by the client (or mobile node) and signaling between the client and server in WLAN-specific frames is used. On the other hand, in a cellular system discussed in Raith et al., dedicated channels (control channels) are used (see, for example, column 3, lines 47-59, of Raith et al.). Furthermore, Applicants submit that the very logic and order of control and signaling performed in some embodiments of the present invention (*i.e.* the decision on the changeover of the communication connection) is different between WLAN and cellular systems, such as the initiation of measurements,

information requests, and the like. As such, Applicants submit that a person of ordinary skill in the art would not merely be able to look at a document discussing an 802.11 WLAN and derive the logic discussed above. Thus, if searching for a solution to decrease the efforts necessary for deciding on a communication connection changeover, Applicants submit that a person of ordinary skill in the art would not refer to Raith et al. as being relevant to a solution in a WLAN communication network since the system and logical structure of each differs significantly with respect to handover processing. Thus, compatibility problems pertaining to signaling flow and transfer mechanisms (channels and the like) arise when transferring mechanisms discussed in Raith et al. to a WLAN architecture.

Independent claim 25 also recites, in part, “the communication information further comprises a frequency band coverage indicator related to at least one frequency band of neighboring access nodes of the apparatus in the wireless communication network.” These features are substantially similar to those previously recited in cancelled claim 79. independent claims 32, 44, 45, 48 and 49, which each have their own scope, recite similar features. The Office Action relied on column 7, lines 41-67 and column 8, lines 1-11, of Raith et al. to allegedly teach these features. Applicants respectfully disagree.

Applicants respectfully submit that the cited section of Raith et al. generally discusses that respective information may be provided by an originating base station and the replacement serving base station (so-called “soft handover”). The information transmitted from the base station 30 to the mobile station 32 appears to be a command for

the handover decided by the base stations. This is not a **frequency band coverage indicator**, as claimed, that is usable for the subscriber station for a handover decision made by the subscriber station itself (per WLAN operation under 802.11). Further, nothing is cited or found in Procter et al. that cures these deficiencies of Raith et al.

Claims 79-84 have been cancelled without prejudice or disclaimer. Claims 27, 28, 31, 34-36, 39-43, 56, 58, 59, 61, 66, 67, 70-72 and 74-78 depend from claims 25, 32, 48 or 49 and add further features thereto. Thus, the arguments above with respect to the independent claims also apply to the dependent claims.

Per the above, Raith et al. and Procter et al. fail to teach or suggest all of the features of the above-rejected claims under 35 U.S.C. § 103(a). Accordingly, it is respectfully submitted that the rejection is overcome and respectfully requested that the rejection be withdrawn.

Claims 29, 37, 68 and 73 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Raith et al. in view of Procter et al. and further in view of Applicants' Background. Claims 29, 37, 68 and 73 depend from independent claims 25, 32, 48 or 49 and add further features thereto. Nothing is cited or found in Applicants' Background that overcomes the deficiencies of Raith et al. and Procter et al. discussed above with respect to the independent claims. Thus, the arguments above with respect to the independent claims also apply to claims 29, 37, 68 and 73.

Accordingly, it is respectfully submitted that the rejection is overcome and respectfully requested that the rejection be withdrawn.

Conclusion

For at least the reasons presented above, it is respectfully submitted that claims 25, 27-29, 31, 32, 34-37, 39-45, 48, 49, 56, 58, 59, 61, 66-78, 85 and 86, comprising all of the currently pending claims, patentably distinguish over the cited art. Accordingly, it is respectfully requested that the claims be allowed and the application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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